## IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF OKLAHOMA

STATE OF OKLAHOMA, et al.,	)
Plaintiffs,	)
v.	Case No. 4:05-cv-00329-GKF-PJC
TYSON FOODS, INC., et al.,	)
Defendants.	)
	)

# DEFENDANTS' OPPOSITION TO PLAINTIFFS' MOTION TO PRECLUDE EXPERT TESTIMONY OF DEFENDANTS' WITNESS MICHAEL J. MCGUIRE, PH.D. [Dkt. No. 2060]

Defendants respectfully submit this response in opposition to Plaintiffs' motion to exclude the expert testimony of Michael J. McGuire, Ph.D., P.E., B.C.E.E. *See* State of Oklahoma's Motion in Limine to Preclude Expert Testimony of Defendants' Witness Michael J. McGuire, [Dkt. No. 2060] (May 18, 2009) ("Motion"). Plaintiffs' Motion argues unconvincingly that Dr. McGuire – despite having served for years as director of water quality for the largest drinking water utility in the United States – should be prohibited from offering opinions about the quality and treatment of drinking water because he is not qualified as an expert in the technical fields of limnology, hydrology, or toxicology. Plaintiffs' misguided contention belies two critical facts: qualification as an expert in these fields is not necessary for Dr. McGuire's stand-alone opinions about drinking water quality and treatment, and the opinions of experts in limnology, hydrology, and toxicology fully support and confirm Dr. McGuire's conclusions.

Dr. McGuire is a foremost expert on drinking water and its treatment. Drinking water treatment issues have been the subject of more than 240 of Dr. McGuire's publications and presentations. *See* Exhibit A, Résumé of Michael J. McGuire, A12 – A38. Dr. McGuire's 40 years experience with water matters extends beyond the processes related to the treatment of drinking water and involves confronting issues like those central to this litigation, including evaluation of potential human health risks associated with drinking water, the effects of sources and flow on drinking water quality, and the constituents present in untreated and treated water. In addition to his wealth of experience, Dr. McGuire bases his opinions upon reliable, tested, and credible analyses, and his conclusions are supported by appropriate validation in the limited instances in which he utilized another's statistical calculations.

Dr. McGuire's testimony readily satisfies the *Daubert* standards for admissibility, and his opinions should be admitted at trial. *See Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and Fed. R. Evid. 104, 702.

#### LEGAL STANDARD

Federal Rule of Evidence 702 permits "a witness qualified as an expert by knowledge, skill, experience, training, or education" to testify regarding "scientific, technical, or other specialized knowledge [that will] assist the trier of fact to understand the evidence or to determine a fact in issue" so long as "(1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case." Fed. R. Evid. 702. Trial courts are charged with ensuring that expert testimony presented to the jury is both relevant and reliable.

See Exhibit B, the Expert Report of Michael J. McGuire, p. 1 - 2, 66 - 68, 85, and 91 - 92. Presumably, precluding this and similar opinions is a priority for Plaintiffs.

Among his opinions, Dr. McGuire has declared that the water served to customers of utilities using the Illinois River and Lake Tenkiller is safe and does not pose a danger to human health.

Attorney General of Oklahoma v. Tyson Foods, Inc., \_\_ F.3d \_\_, 2008 WL 1313216, at \*6 (10th Cir. 2009); Dodge v. Cotter, 328 F.3d 1212, 1221 (10th Cir. 2003). The Court must first "determine if the expert's proffered testimony has a reliable basis in the knowledge and experience of his or her discipline." Norris v. Baxter Healthcare Corp., 397 F.3d 878, 883-84 (10th Cir. 2005) (quotations, ellipses omitted). Then, the Court must determine whether the challenged expert's reasoning and methodology is reliable. Id. at 884. If an expert's testimony is grounded in the expert's area of specialized knowledge, based on sound data and reliable methodology, and soundly applied to the facts of the case, the testimony should be admitted.

#### **DISCUSSION**

Plaintiffs' objections to Dr. McGuire's testimony are based upon an incomplete critique of his opinions. A comprehensive analysis of his opinions, and their foundations, supports fully the admissibility of his testimony.

A. McGuire's "Expert Opinion #1" is Based on Reliable Information, is Supported by Peer-Reviewed Literature, and is Within His Expertise.

Plaintiffs seek to exclude the first ("Opinion #1") of five expert opinions presented in Dr. McGuire's written report, claiming erroneously that the opinion is based upon a "novel statistical analysis," that it contradicts an article upon which he relies, and that it exceeds the scope of his expertise.<sup>2</sup> Dr. McGuire's Opinion #1 – in essence that application of poultry litter in the IRW has no discernable impact on total organic carbon (TOC) in IRW waters and that there is no imminent and substantial endangerment to human health from disinfection by-products (DPB) in

<sup>&</sup>lt;sup>2</sup> In their Motion, Plaintiffs offer no objection to two of Dr. McGuire's opinions, Opinion #2 and Opinion #4, that Plaintiffs have not established any significant taste and order problems in the IRW and that Plaintiffs have not established a connection between nitrate as a result of field application of poultry litter and nitrate concentrations in residential wells in the IRW, respectively. These opinions will then, presumably, be admitted without opposition.

drinking water served by IRW utilities – is based upon sound analyses, is consistent with the literature he relies upon, and is within his expertise.

#### 1. Opinion #1 is based on reliable statistical analyses.

In formulating his opinions related to this litigation, Dr. McGuire applied the same expertise and undertook the same methods of data compilation that he has used on many occasions throughout the course of his four-decade professional career, either performing those methods himself or personally directing and supervising them. *See* Exhibit C, Declaration of *Michael J. McGuire* at ¶2. From supervision of the research program involving the surveillance of water quality of the Delaware River Estuary for the Philadelphia Water Department, to his directorship of water quality (with regulatory compliance and monitoring duties) for the distribution system serving some 16 million people in Southern California, to his direct role in the compilation of the Information Collection Rule (ICR) data<sup>3</sup> used by the U.S. Environmental Protection Agency (USEPA), Dr. McGuire has frequently been responsible for making expert judgments on datasets large and small, utilizing the work of supervised statisticians, and making determinations about the safety of drinking water. Nothing Dr. McGuire has done in this case has departed from his prior work which regulators, courts, and consumers have relied on for years.

To confirm scientific reliability of his Opinion #1, Dr. McGuire properly applied (a limited number of) statistical analyses performed by Clifton Bell in creating this portion of McGuire's written report. *See* Exhibit B, Expert Report of Michael J. McGuire, p. 23 - 24, 30 – 32, and 51 – 52. Bell is an engineer with Malcolm Pirnie specializing in statistical analyses of environmental engineering datasets. Declaration of *M. McGuire* at ¶4. As Dr. McGuire explained in deposition testimony, Bell performed the statistical analyses under Dr. McGuire's

<sup>&</sup>lt;sup>3</sup> The ICR was the largest data collection effort of its kind ever conducted. Declaration of M. McGuire at  $\P 3$ .

"supervision and direction." *See* Exhibit D, McGuire Depo. at 421. Dr. McGuire further explained his qualifications in overseeing such work, affirming it is "the kind of analysis I've done on extremely large datasets throughout my career." McGuire Depo. at 495 – 497. It is precisely this type of work and experience that makes Dr. McGuire properly qualified to interpret the limited statistical analyses completed by Bell, in finalizing a part of his Opinion #1.

In performing his professional work as a drinking water expert, Dr. McGuire regularly relies upon his own analytical work and the work of statisticians, such as Clifton Bell. In no fewer than seven published, peer-reviewed works under his authorship, Dr. McGuire has performed or supervised data set analysis and statistical comparisons. Furthermore, Dr. McGuire served as a senior editor of *Information Collection Rule Data Analysis* (published in 2002). Résumé of Michael J. McGuire, A-39. This book was a culmination of years of work completed by Dr. McGuire regarding data analyses plans specific to drinking water facilities.

The peer-reviewed publications of Dr. McGuire's work on similar issues and their general

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<sup>&</sup>lt;sup>4</sup> See McGuire, M.J., Tanaka, T.S., and Davis, M.K., "Experimental Error Estimates Associated with Pilot-Scale Investigations of Trace Organic Removals," in Treatment of Water by Granular Activated Carbon, M.J. McGuire and I.H. Suffet (Eds.), Advances in Chemistry Series Number 202, American Chemical Society, Washington, D.C., 1983; McGuire, M.J. and Meadow, R.G., "AWWARF Trihalomethane Survey," Jour. AWWA, Vol. 80, No. 1, January 1988 (pp. 61-68), [Reprinted in Disinfection By-Products: Current Perspectives, AWWA, Denver, Colo., 1989] (pp. 3-10)]; Krasner, S.W., McGuire, M.J., Jacangelo, J.G., Patania, N.L., Reagan, K.M., Aieta, E.M., "The Occurrence of Disinfection By-Products in U.S. Drinking Water," Jour. AWWA, Vol. 81, No. 8, August 1989 (pp. 41-53); McGuire, M.J., Davis, M.K., Tate, C.H., Aieta, E.M., Howe, E.W., and Crittenden, J.C., "Evaluating GAC for Trihalomethane Control," Jour. AWWA, Vol. 83, No. 1, January 1991 (pp. 38-48); McGuire, M.J., and Graziano, N., "Trihalomethanes in U.S. Drinking Water: NORS to ICR," in <u>Information Collection Rule Data Analysis</u>, edited by M.J. McGuire, J.L. McLain and A. Obolensky, American Water Works Association Research Foundation, Denver, Colorado, 2002; McGuire, M.J., and Hotaling, M.L., "Relationships Between Source Water Quality and Choices of Primary and Secondary Disinfectants," in Information Collection Rule Data Analysis, edited by M.J. McGuire, J.L. McLain and A. Obolensky, American Water Works Association Research Foundation, Denver, Colorado, 2002; McGuire, M.J., Loveland, Means, E.G., and Garvey, J., "Use of Flavor Profile and Consumer Panels to Determine Differences Between Local Water Supplies and Desalted Seawater," Water *Science and Technology*, v. 55, n. 5, pp. 275-282, 2007.

acceptance in the scientific community surely satisfies *Daubert* criteria. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

Dr. McGuire has also in prior litigation rendered opinions based in part upon another's statistical work performed at his direction. For example, in *United Water New York, Inc. v.*Amerada Hess Corp. et al and County of Suffolk and Suffolk County Water Authority v. Amerada Hess Corp. et al, U.S. District Court, Southern District of New York, Case Nos. 04 Civ. 2389 and 04 Civ. 5424, respectively, Dr. McGuire developed his opinions pursuant to his analysis of statistics regarding large datasets developed by statistician Jeffrey Rosen, prepared at McGuire's direction, and testified.

Plaintiffs' assertion that Dr. McGuire has "only done analysis involving 6 or 10 data points" is a mischaracterization of McGuire's testimony. Plaintiffs' Motion, Dkt. #2060, at 8. Dr. McGuire never testified (or implied) that his professional work has consisted exclusively of reviewing 10 or fewer data points; as evidenced by his résumé, this suggestion by Plaintiffs is simply not accurate. Résumé of Michael J. McGuire, A3 – A8 (identifying, in part, McGuire's experience supervising the research program studying water quality of the Delaware River Estuary for the Philadelphia Water Department and management of 82 technical, professional, and administrative personnel responsible for, among other matters, control of water quality at five water treatment plants in Southern California). Additionally, Plaintiffs confusingly fail to address the portion of Dr. McGuire's testimony explaining that the only "difference" between the subject dataset in this litigation and many other smaller datasets is the comprehensive scope of this dataset; according to McGuire, this dataset is "unusual compared to what we normally have to work with when we're doing comparisons of environmental data. Usually we have *too little information.*" McGuire Depo. at 236; emphasis added. In the situation presented by this

litigation, Dr. McGuire had the luxury when developing his opinion of having *more* data than would often be available. Dr. McGuire's access here to more data certainly does not make his opinions less reliable.

Plaintiffs also incorrectly claim that a comparison, like Dr. McGuire's, of the total organic compound (TOC) data from the Information Collection Rule (ICR) and data from the IRW is scientifically inaccurate. Plaintiffs' Motion, Dkt. #2060, at 6. Of course, the purpose of the ICR was to preserve a large dataset of high-value information on water quality – supply, treatment, and processes – for input into the USEPA regulatory processes.<sup>5</sup> This dataset was released by the USEPA as a relational database and is regularly used by academics and by water utilities as a comparison and benchmark dataset. By illustration, the following includes peerreviewed references utilizing the ICR data: Improved Exposure Assessment on Existing Cancer Studies, Amy, Gary, et al, Dec. 2005 (study to reanalyze two peer-reviewed epidemiology studies relating to chlorinated drinking water and trihalomethanes, and using "more comprehensive" ICR data); Analysis of Halogen Substitution Patterns in DBPs Using ICR Data and Their Applications, Obolensky, Alexa and Singer, Philip, Nov. 2003 (study using ICR data to compare the percent halogen as bromine observed in four classes of disinfection byproducts); Relative Dominance of HAAs and THMs in Treated Drinking Water, Singer, Philip, et al, Aug. 2002 (investigation of the relative occurrence of haloacetic acids and trihalomethanes in treated drinking waters and determination of water quality, treatment and distribution system conditions influencing concentrations, and using ICR data to perform comprehensive assessment); Effect of SUVA and Enhanced Coagulation on Removal of TOX Precursors, Archer, Aaron and Singer,

<sup>&</sup>lt;sup>5</sup> USEPA, National Primary Drinking Water Regulations: Disinfectants and Disinfection Byproducts [Stage 2 Disinfection Byproducts Rule], *Federal Register*, 71(2), pp. 388-493, January 4, 2006.

Philip, Aug. 2006 (research designed to evaluate how sample waters responded to coagulation and chlorination, and to reinforce findings and improve on limitations associated with an earlier analysis of ICR data); Detection of Astroviruses, Enteroviruses, and Adenovirus Types 40 and 41 in Surface Waters Collected and Evaluated by the Information Collection Rule and an Integrated Cell Culture-Nested PCR Procedure, Chapron, Christopher, et al, Applied and Environmental Microbiology, Vol. 66, No. 6, June 2000 (evaluation of integrated cell culture-reverse transcription-PCR (ICC-RT-PCR) procedure coupled with nested PCR to detect human astroviruses, enteroviruses, and adenovirus types 40 and 41 in surface water samples that were collected and evaluated by using the ICR method); Analysis of 500-ng/l levels of Bromate in Drinking Water by Direct-Injection Suppressed Ion Chromatography Coupled with a Single, Pneumatically Delivered Post-Column Reagent, Wagner, Herbert, et al, Journal of Chromatography, Vol. 850, Issues 1-2, July 1999 (description of the research conducted at the EPA's Technical Support Center laboratory, and relating to ICR); *Identifying Public Water* Facilities with Low Spatial Variability of Disinfection By-Products for Epidemiological Investigations, Hinckley, A.F., et al, Occupational and Environmental Medicine, 2005, Vol. 62, (developing approach to mitigate potential for misclassification of exposure in certain epidemiological studies, conducting a feasibility study to develop methods for community selection using the ICR database); Information Collection Rule Data Analysis, McGuire, Michael, et al, March 2003 (23 peer-reviewed chapters) (text providing introduction to wealth of information on drinking water quality, pathogen occurrence, and water treatment available in the ICR dataset).

Importantly, the ICR is "representative of what is out there in the way of TOC and raw water supplies in this country." McGuire Depo. at 373. In a part of Opinion #1, Dr. McGuire

simply compared median TOC data from the ICR and from the IRW to determine if "the TOC data from the IRW utilities was in any way wildly different from TOC levels in the rest of the United States." McGuire Depo. at 366.

Plaintiffs' erroneously suggest an importance of the collection at different times of TOC data in the ICR and the IRW. Plaintiffs' Motion at 6. Plaintiffs, unfortunately, did not examine Dr. McGuire about these time differences at his deposition, and their understanding is likely incomplete and is thus inaccurate. Declaration of *M. McGuire* at ¶5. TOC data, notably, do not vary significantly over time for particular water supplies. *Id.* The TOC in a water supply is generally representative of the watershed characteristics, soil composition, and overall algal productivity. More than twenty years (1984 to 2009) of TOC data from Lake Mathews in Southern California have varied little around a range of 2.6 to 3.8 mg/L. Given this relative stability of TOC data over time, comparing long-term TOC datasets for different water supplies collected up to ten years apart is appropriate. *Id.* 

Moreover, while the TOC data for the ICR and for the IRW were collected during different times and in different locations, their statistical comparison and subsequent analyses are scientifically valid under an unpaired dataset analysis according to the Mann-Whitney U Test. McGuire Depo. at 374. In fact, federal courts have found (1) it is acceptable to compare unpaired datasets, and (2) the Mann-Whitney U Test is a reliable statistical method to analyze such unpaired datasets. Dr. McGuire confirmed the validity of the Mann-Whitney U Test during his deposition testimony. McGuire Depo. at 374. The Mann-Whitney U Test thus

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<sup>&</sup>lt;sup>6</sup> See generally Baker v. Secretary of Department of Health and Human Services, 2003 WL 22416622, 8 (Fed.Cl.,2003); Bridgeport Guardians, Inc. v. City of Bridgeport, 933 F.2d 1140, 1147 (C.A.2 Conn.,1991); Ranbaxy Laboratories Ltd. v. Abbott Laboratories, 2005 WL 3050608, 26 (N.D.III.,2005).

satisfies the *Daubert* requirement of having been both tested and accepted by federal courts.

Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).

Additionally, Plaintiffs incorrectly assert that "according to Dr. McGuire's testimony, the ICR data set was quality control checked at 'five or six different levels' whereas the IRW data set used by Dr. McGuire was not formally quality control checked, but rather data points were omitted at the choice and discretion of Dr. McGuire. *See* Ex. 2, pp. 363-364." *See* Plaintiffs' Motion at 7. In fact, TOC data were excluded by Dr. McGuire from the IRW data set because they were clearly outliers that had escaped detection in the quality control procedures used by the IRW utilities and were greater than 99% of the rest of the data set. <sup>7</sup> Dr. McGuire's 40 years of data analysis experience qualifies him to make expert judgments on when data should be classified as outliers. Moreover, Dr. McGuire explained why and how TOC were excluded: "To determine average TOC values, data that was obviously incorrect had to be removed from the data set. Any value over 5 mg/L was discarded unless there was additional information that supported its inclusion. A TOC of 5 mg/L represents data points beyond the 99<sup>th</sup> percentile for the IRW TOC data set." Expert Report of Michael J. McGuire, p. 21.

# 2. Opinion #1 is supported and confirmed by the peer-reviewed literature relied upon by McGuire.

In the paper entitled "Internal and External Sources of THM Precursors in a Midwestern Reservoir," Paul Bukaveckas *et al.* examined the influences of various activities in a watershed regarding DPB formation potential. *See* Document 2060-5 [Dkt. No. 2060] (May 18, 2009). Part of Bukaveckas' paper attempts to ascribe different possible sources of DBP precursors

<sup>&</sup>lt;sup>7</sup> All TOC samples collected by IRW utilities are required by federal and state regulation to be collected and analyzed under strict quality control and quality assurance procedures. USEPA, National Primary Drinking Water Regulations: Disinfectants and Disinfection Byproducts [Stage 1 Disinfection Byproducts Rule], *Federal Register*, 63(241), pp. 69389-69476, December 16, 1998.

either to inputs to Taylorsville Reservoir from tributaries or to production by algae in the reservoir. However, as with many of his predecessors, Bukaveckas never connected any specific activities occurring within the Taylorsville Reservoir watershed to the presence of DBP-formation potential substances. Bukaveckas concluded that "current methodologies do not allow for the partitioning of inputs according to their origin in terrestrial versus upstream (aquatic) habitats." Document 2060-5 at 9 (135 in original). This conclusion directly supports Dr. McGuire's opinion that the "production of trihalomethanes and haloacetic acids in water served by utilities providing drinking water from Lake Tenkiller and the Illinois River cannot be linked to the application of poultry litter in the IRW." Expert Report of Michael J. McGuire, p. 1.

In this article, reviewed by Dr. McGuire<sup>8</sup> in the limited context of a search for information about identifying sources for materials that might result in DBP formation, Bukaveckas mentions a judgment that soluble particles cannot be removed from treatment. As Plaintiffs noted in their Motion, at deposition Dr. McGuire disagreed with this assertion by Bukaveckas and explained that, through a coagulation process, soluble particles in fact *can* be removed during treatment. Dr. McGuire's disagreement with Bukaveckas on this point in no way invalidates Dr. McGuire's citation to Bukaveckas and Bukaveckas's conclusion that a link between the activities in a watershed and DBP formation cannot be identified.<sup>9</sup> Dr. McGuire relied upon Bukaveckas's article to reiterate (based on a recently published, peer-reviewed

<sup>&</sup>lt;sup>8</sup> The Bukaveckas article is but one of several reviewed by Dr. McGuire in preparation of his expert report and referenced. Interestingly, Dr. McGuire also reviewed a report co-authored by Dr. Cooke (Cooke and Carlson 1989) that admits that it is not possible to manage reservoirs by trying to control sources of THMFP.

<sup>&</sup>lt;sup>9</sup> In another section of their Motion, Plaintiffs contend that Bukaveckas's article "contradicts" Dr. McGuire's opinion that the sources of TOC cannot be determined. Plaintiffs' Motion at 12. This claim is unsupportable.

article) that the scientific community has been unable to link specific activities to DBP formation. Plaintiffs' contention – that Dr. McGuire's disagreement with an unrelated, discrete statement in an article cited otherwise with approval in his written report somehow undermines McGuire's opinions – is unpersuasive, and McGuire's refusal to blindly adopt each of Bukaveckas's statements in no way supports a conclusion that Dr. McGuire's opinion is unreliable.

### 3. McGuire is qualified to offer an opinion regarding potential sources of drinking water contamination.

As mentioned *supra*, Dr. McGuire has 40 years experience and over 240 publications and presentations regarding drinking water and treatment of drinking water. Among his many professional endeavors, Dr. McGuire instituted the most comprehensive taste and odor control program of any U.S. water utility, while at Metropolitan Water District of Southern California (Metropolitan); managed and led the evaluation of alternative strategies for compliance with DBP regulation at Metropolitan, which resulted in the construction and operation of a \$13 million oxidation demonstration facility at one of the system's water treatment plants; has consulted with dozens of water utilities in the U.S. in helping them develop control strategies for trihalomethanes and haloacetic acids in drinking water and controlling DBP concentrations in distribution systems (with clients including Phoenix Water Department, Philadelphia, New York, and Dallas); and, performed numerous investigations of groundwater contamination by organic and inorganic constituents, including the evaluation of the water quality changes in Colorado River water for Tucson, Arizona.

Dr. McGuire has extensive experience identifying (and excluding) sources of water contamination, and his expertise permits his ability to identify what is – and what is not – a contamination source. Plaintiffs wrongly claim that Dr. McGuire's "expertise limited to

engineering for facilities that are built for treating drinking water" prevents his developing an "opinion on whether the land application of poultry litter is impacting the water quality in the IRW." Plaintiffs' Motion at 12. In fact, water utilities throughout the U.S. have relied upon Dr. McGuire's ability to identify sources impacting water quality, including in the San Gabriel Valley (supervising a confirmatory analysis of volatile organic chemicals in groundwater sample), Main San Gabriel Basin Watermaster (overseeing studies investigating nitrate and perchlorate removal from groundwater), Long Beach Water Department (studying the organic and inorganic substances present in well supplies), and Glendale, California (investigations regarding the removal of hexavalent chromium from groundwater).

Dr. McGuire is likewise qualified to – and did – identify the myriad deficiencies in Plaintiffs' experts' efforts to prove water quality in the IRW has been impacted by the land application of poultry litter. As explained by Dr. McGuire, Plaintiffs' experts have grossly oversimplified the manner in which trihalomethanes and haloacetic acids are produced, which happens to support the (incorrect) claim that all DBPs produced by IRW water utilities are caused by poultry litter; in fact, Plaintiffs' experts have presented no proof that field applied poultry litter accounts for any of the DBP precursors in the IRW. Based upon sound scientific grounding, Dr. McGuire has made clear that Plaintiffs' unconventional approach in attempting to name poultry litter as a source of drinking water contamination is untested and lacking all scientific validity.

In short, Dr. McGuire's years of professional experience and applied research (published and otherwise), perfectly qualify him to opine on the potential sources of contamination of drinking water in the IRW and to render a proper criticism of Plaintiffs' faulty theory of water quality impact from poultry litter application in the IRW.

# B. McGuire is Qualified to Offer Opinions Regarding the Safety of Regulated Supplies of Drinking Water.

Plaintiffs move to prevent Dr. McGuire from offering any opinions regarding human health risks. Plaintiffs wrongly suggest that, because he is not a toxicologist and admits to having no qualification to opine on risks posed by ingesting DBPs, Dr. McGuire should be stopped from testifying that: (i) there is no imminent and substantial endangerment to human health from DBPs in drinking water served by IRW utilities (excerpt from Opinion #1); (ii) there is no imminent and substantial endangerment to human health from cyanotoxins in drinking water served by IRW utilities (excerpt from Opinion #3); or, (iii) that the water served to customers of utilities using the Illinois river and Lake Tenkiller is safe and does not pose a danger to human health. Plaintiffs' Motion, Dkt. #2060, at 14. A complete review of the bases of Dr. McGuire's opinions establishes that each is scientifically-based and within the proper purview of his expertise.

Dr. McGuire is not a toxicologist (or hydrologist or limnologist). However, Dr. McGuire's education, knowledge, and experience qualify him to testify regarding the safety of drinking water supplies. Dr. McGuire's time as the Director of Water Quality for the Metropolitan Water District of Southern California in Los Angeles for six years, where he was charged with the safety of drinking water used by up to 16 million citizens in Southern California, constitutes empirical validation of his singular expertise in effectively assessing the safety of drinking water for human consumption. Résumé of Michael J. McGuire, A-5.

As detailed *supra*, Dr. McGuire's expertise has been sought by water systems throughout the U.S. Dr. McGuire's vast understanding of public health issues and his continued participation in the regulatory processes that ensure the safety of drinking water qualify him to

study and render opinions on matters related to drinking water safety in the IRW. And, based upon his expertise and review of applicable Oklahoma regulations, drinking water data, and samples, Dr. McGuire is qualified to testify – consistent with Oklahoma regulators – that the drinking water in the IRW meets state safety standards and is safe.

#### **CONCLUSION**

Each of Dr. McGuire's opinions and his testimony are well-based and reliable, are consistent with peer-reviewed research and literature, and fall squarely within his area of expertise. Dr. McGuire's opinions are therefore admissible under *Daubert*.

Respectfully submitted,

/s/ James M. Graves

James M. Graves (OB #16657)
Woody Bassett (appearing pro hac vice)
K.C. Dupps Tucker (appearing pro hac vice)
BASSETT LAW FIRM LLP
221 North College Avenue
P.O. Box 3618
Fayetteville, AR 72702-3618
(479) 521-9996
(479) 521-9600 Facsimile

-And-

Randall E. Rose (OB #7753) George W. Owens THE OWENS LAW FIRM, P.C. 234 West 13<sup>th</sup> Street Tulsa, OK 74119 (918) 587-0021 (918) 587-6111 Facsimile

ATTORNEYS FOR GEORGE'S, INC. and GEORGE'S FARMS, INC., and for purposes of this Opposition, for all defendants

John H. Tucker, OBA #9110 Theresa Noble Hill, OBA #19119 Leslie Jane Southerland Colin Hampton Tucker RHODES, HIERONYMUS, JONES, TUCKER & GABLE, PLLC 100 W. Fifth Street, Suite 400 (74103-4287) P.O. Box 21100 Tulsa, OK 74121-1100 Telephone: (918) 582-1173 Facsimile: (918) 592-3390

-and-

Terry Wayen West THE WEST LAW FIRM

-and-

Delmar R. Ehrich **Bruce Jones** Krisann C. Kleibacker Lee Todd P. Walker Christopher H. Dolan FAEGRE & BENSON LLP 2200 Wells Fargo Center 90 South Seventh Street Minneapolis, MN 55402 Telephone: (612) 766-7000 Facsimile: (612) 766-1600

-and-

Dara D. Mann MCKENNA, LONG & ALDRIDGE, LLP

ATTORNEYS FOR CARGILL, INC. and CARGILL TURKEY PRODUCTION, LLC

Stephen L. Jantzen, OBA #16247
Patrick M. Ryan, OBA #7864
Paula M. Buchwald
RYAN, WHALEY, COLDIRON & SHANDY, P.C.
119 North Robinson
900 Robinson Renaissance
Oklahoma City, OK 73102
Telephone: (405) 239-6040

-and-

Facsimile: (405) 239-6766

Thomas C. Green, Esq.
Mark D. Hopson, Esq.
Timothy K. Webster, Esq.
Jay T. Jorgensen, Esq.
Gordon D. Todd
SIDLEY AUSTIN BROWN & WOOD LLP
1501 K Street, N.W.
Washington, D.C. 20005-1401
Telephone: (202) 736-8700
Facsimile: (202) 736-8711
-and-

Robert W. George, OBA #18562 Michael R. Bond Erin W. Thompson L. Bryan Burns KUTAK ROCK LLP The Three Sisters Building 214 West Dickson Street Fayetteville, AR 72701-5221 Telephone: (479) 973-4200 Facsimile: (479) 973-0007

ATTORNEYS FOR TYSON FOODS, INC.; TYSON POULTRY, INC.; TYSON CHICKEN, INC.; and COBB-VANTRESS, INC.

A. Scott McDaniel, OBA # 16460
Nicole M. Longwell, OBA #18771
Philip D. Hixon, OBA #19121
Craig A. Mirkes, OBA #20783
McDANIEL, HIXON, LONGWELL & ACORD, PLLC 320 South Boston Avenue, Suite 700
Tulsa, OK 74103

Telephone: (918) 382-9200 Facsimile: (918) 382-9282

-and-

Sherry P. Bartley (*Appearing Pro Hac Vice*) MITCHELL, WILLIAMS, SELIG, GAGES & WOODYARD, P.L.L.C. 425 W. Capitol Avenue, Suite 1800 Little Rock, AR 72201 Telephone: (501) 688-8800

### ATTORNEYS FOR PETERSON FARMS, INC.

Robert E. Sanders E. Stephen Williams YOUNG WILLIAMS P.A 2000 AmSouth Plaza P.O. Box 23059 Jackson, MS 39225-3059 Telephone: (601) 948-6100 Facsimile: (601) 355-6136

-and-

Robert P. Redemann, OBA #7454 Lawrence W. Zeringue, OBA #9996 David C. Senger, OBA #18830 PERRIN, McGIVERN, REDEMANN, REID, BERRY & TAYLOR, P.L.L.C. P.O. Box 1710 Tulsa, OK 74101-1710 Telephone: (918) 382-1400 Facsimile: (918) 382-1499

COUNSEL FOR CAL-MAINE FOODS, INC. and CAL-MAINE FARMS, INC.

John R. Elrod, Esq. Vicki Bronson, OBA #20574 P. Joshua Wisley Bruce W. Freeman D. Richard Funk CONNER & WINTERS, LLP 211 East Dickson Street Fayetteville, AR 72701 Telephone: (479) 582-5711 Facsimile: (479) 587-1426

ATTORNEYS FOR SIMMONS FOODS, INC.

#### **CERTIFICATE OF SERVICE**

I certify that on the 5th day of June, 2009, I electronically transmitted the attached document to the following ECF registrants:

W. A. Drew Edmondson, Attorney General Kelly Hunter Burch, Assistant Attorney General J. Trevor Hammons, Assistant Attorney General Daniel P. Lennington, Assistant Attorney General fc\_docket@oag.state.ok.us kelly\_burch@oag.state.ok.us trevor\_hammons@oag.state.ok.us daniel.lennington@oag.ok.gov

Melvin David Riggs
Joseph P. Lennart
Richard T. Garren
Sharon K. Weaver
Robert Allen Nance
Dorothy Sharon Gentry
David P. Page
Riggs Abney Neal Turpen Orbison & Lewis

driggs@riggsabney.com jlennart@riggsabney.com rgarren@riggsabney.com sweaver@riggsabney.com rnance@riggsabney.com sgentry@riggsabney.com dpage@riggsabney.com

Louis W. Bullock Robert M. Blakemore Bullock, Bullock & Blakemore lbullock@mkblaw.net bblakemore@bullockblakemore.com Elizabeth C. Ward lward@motleyrice.com Frederick C. Baker fbaker@motleyrice.com bnarwold@motleyrice.com William H. Narwold Lee M. Heath lheath@motleyrice.com exidis@motleyrice.com Elizabeth Claire Xidis Ingrid L. Moll imoll@motleyrice.com Jonathan D. Orent jorent@motleyrice.com Michael G. Rousseau mrousseau@motleyrice.com Fidelma L. Fitzpatrick ffitzpatrick@motleyrice.com

Motley Rice, LLC

#### COUNSEL FOR PLAINTIFFS, STATE OF OKLAHOMA

Stephen L. Jantzen sjantzen@ryanwhaley.com
Patrick M. Ryan pryan@ryanwhaley.com
Paula M. Buchwald pbuchwald@ryanwhaley.com
Ryan, Whaley & Coldiron, P.C.

Mark D. Hopson mhopson@sidley.com
Jay Thomas Jorgensen jjorgensen@sidley.com
Timothy K. Webster twebster@sidley.com
Thomas C. Green tcgreen@sidley.com
Gordon D. Todd gtodd@sidley.com

Sidley Austin LLP
Robert W. George robert.george@tyson.com
L. Bryan Burns bryan.burns@tyson.com
Michael Bond michael.bond@kutakrock.com
Erin W. Thompson erin.thompson@kutakrock.com

Kutak Rock LLP

COUNSEL FOR TYSON FOODS, INC., TYSON POULTRY, INC., TYSON CHICKEN, INC.; AND COBB-VANTRESS, INC.

R. Thomas Lay rtl@kiralaw.com

Kerr, Irvine, Rhodes & Ables

Jennifer S. Griffin jgriffin@lathropgage.com

David Gregory Brown Lathrop & Gage, L.C.

COUNSEL FOR WILLOW BROOK FOODS, INC.

Page 21 of 24

Robert P. Redemann rredemann@pmrlaw.net
Lawrence W. Zeringue lzeringue@pmrlaw.net
David C .Senger dsenger@pmrlaw.net

Perrine, McGivern, Redemann, Reid, Berry & Taylor, PLLC

Robert E. Sanders rsanders@youngwilliams.com
E. Stephen Williams steve.williams@youngwilliams.com

Young Williams P.A.

### COUNSEL FOR CAL-MAINE FOODS, INC. AND CAL-MAINE FARMS, INC.

A. Scott McDaniel smcdaniel@mhla-law.com
Nicole Longwell nlongwell@mhla-law.com
Philip Hixon phixon@mhla-law.com
Craig A. Merkes cmerkes@mhla-law.com

McDaniel, Hixon, Longwell & Acord, PLLC

Sherry P. Bartley sbartley@mwsgw.com

Mitchell, Williams, Selig, Gates & Woodyard, PLLC

COUNSEL FOR PETERSON FARMS, INC.

John R. Elrodjelrod@cwlaw.comVicki Bronsonvbronson@cwlaw.comP. Joshua Wisleyjwisley@cwlaw.comBruce W. Freemanbfreeman@cwlaw.comD. Richard Funkrfunk@cwlaw.com

Conner & Winters, LLLP

COUNSEL FOR SIMMONS FOODS, INC.

John H. Tuckerjtuckercourts@rhodesokla.comColin H. Tuckerchtucker@rhodesokla.comTheresa Noble Hillthillcourts@rhodesokla.com

Rhodes, Hieronymus, Jones, Tucker & Gable

Terry W. West terry@thewestlawfirm.com

The West Law Firm

Delmar R. Ehrich dehrich@faegre.com
Bruce Jones bjones@faegre.com
Krisann Kleibacker Lee kklee@faegre.com
Todd P. Walker twalker@faegre.com
Christopher H. Dolan cdolan@faegre.com

Faegre & Benson LLP

Dara D. Mann

dmann@mckennalong.com

McKenna, Long & Aldridge, LLP

### COUNSEL FOR CARGILL, INC. AND CARGILL TURKEY PRODUCTION, LLC

Michael D. Graves mgraves@hallestill.com
D. Kenyon Williams, Jr. kwilliams@hallestill.com

Hall, Estill, Hardwick, Gable, Golden & Nelson

COUNSEL FOR POULTRY GROWERS/ INTERESTED PARTIES/ POULTRY PARTNERS, INC.

Charles Moulton, Sr. Assistant Attorney General Kendra Akin Jones, Assistant Attorney General charles.moulton@arkansasag.gov Kendra.Jones@arkansasag.gov

Office of the Attorney General

COUNSEL FOR STATE OF ARKANSAS AND THE ARKANSAS NATURAL RESOURCES COMMISSION

Richard Ford richard.ford@crowedunlevy.com
LeAnne Burnett leanne.burnett@crowedunlevy.com

Crowe & Dunlevy

COUNSEL FOR OKLAHOMA FARM BUREAU, INC.

Robin S. Conrad rconrad@uschamber.com

National Chamber Litigation Center

Gary S. Chilton gchilton@hcdattorneys.com

Holladay, Chilton and Degiusti, PLLC

COUNSEL FOR US CHAMBER OF COMMERCE AND AMERICAN TORT REFORM ASSOCIATION

Mark Richard Mullins richard.mullins@mcafeetaft.com

McAfee & Taft

COUNSEL FOR TEXAS FARM BUREAU; TEXAS CATTLE FEEDERS ASSOCIATION; TEXAS PORK PRODUCERS ASSOCIATION AND TEXAS ASSOCIATION OF DAIRYMEN

Mia Vahlberg @gablelaw.com

Gable Gotwals

James T. Banks jtbanks@hhlaw.com Adam J. Siegel ajsiegel@hhlaw.com

Hogan & Hartson, LLP

COUNSEL FOR NATIONAL CHICKEN COUNCIL; POULTRY AND EGG ASSOCIATION & NATIONAL TURKEY FEDERATION

John D. Russell jrussell@fellerssnider.com

Fellers, Snider, Blankenship, Bailey & Tippens, PC

William A. Waddell, Jr. waddell@fec.net
David E. Choate dchoate@fec.net

Friday, Eldredge & Clark, LLP

#### COUNSEL FOR ARKANSAS FARM BUREAU FEDERATION

Barry Greg Reynolds reynolds@titushillis.com
Jessica E. Rainey jrainey@titushillis.com
Titus, Hillis, Reynolds, Love, Dickman & McCalmon

Nikaa Baugh Jordan njordan@lightfootlaw.com William S. Cox, III wcox@lightfootlaw.com

Lightfoot, Franklin & White, LLC

COUNSEL FOR AMERICAN FARM BUREAU AND NATIONAL CATTLEMEN'S BEEF ASSOCIATION

I also hereby certify that I served the attached documents by United States Postal Service, proper postage paid, on the following who are not registered participants of the ECF System:

David Gregory Brown Lathrop & Gage, LC 314 E. High Street Jefferson City, MO 65101

Thomas C. Green Sidley Austin Brown & Wood, LLP 1501 K. St. NW Washington, DC 20005

Cary Silverman Victor E. Schwartz Shook, Hardy & Bacon LLP 600 14<sup>th</sup> St. NW. Ste. 800 Washington, DC 20005-2004

Dustin McDaniel Justin Allen Office of the Attorney General (Little Rock) 323 Center Street, Suite 200 Little Rock, AR 72201-2610 Steven B. Randall 58185 County Road 658 Kansas, OK 74347

George R. Stubblefield HC 66 Box 19-12 Proctor, OK 74457

> /s/ James M. Graves James Graves